

## ABSTRACT

JC10 Rec'd PCT/PTO 15 MAR 2002

This invention relates to a cascade-type scrubber, with which the wet scrubbing of the exhaust gas and removal of droplets from the gas can be performed in one and the same scrubber, producing a pure, dropless gas. It is thus essential that the cascade tubing typical of the cascade scrubber and the equipment for droplet removal are combined into a single compact entity, which is formed of several nested chambers.

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
5 April 2001 (05.04.2001)

PCT

(10) International Publication Number  
**WO 01/23071 A1**

(51) International Patent Classification<sup>7</sup>: **B01D 47/02**

[FI/FI]; Ukonvaaja 6 E 122, FIN-02120 Espoo (FI) **NY-**  
**MAN, Bror** [FI/FI]; Ruispolku 1, FIN-28450 Vanha-Ulvila  
(FI).

(21) International Application Number: PCT/FI00/00834

(22) International Filing Date:  
29 September 2000 (29.09.2000)

(74) Agent: **OUTOKUMPU OYJ**; Intellectual Property Man-  
agement, P.O. Box 27, FIN-02201 Espoo (FI).

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
19992097 30 September 1999 (30.09.1999) FI

(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ,  
BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK,  
DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,  
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,  
LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,  
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,  
UG, US, UZ, VN, YU, ZA, ZW.

(71) Applicant (*for all designated States except US*): **OUT-**  
**OKUMPU OYJ** [FI/FI]; Riihitontuntie 7, FIN-02200 Es-  
poo (FI).

(84) Designated States (*regional*): Eurasian patent (AM, AZ,  
BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE,  
CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,  
NL, PT, SE).

(72) Inventors; and

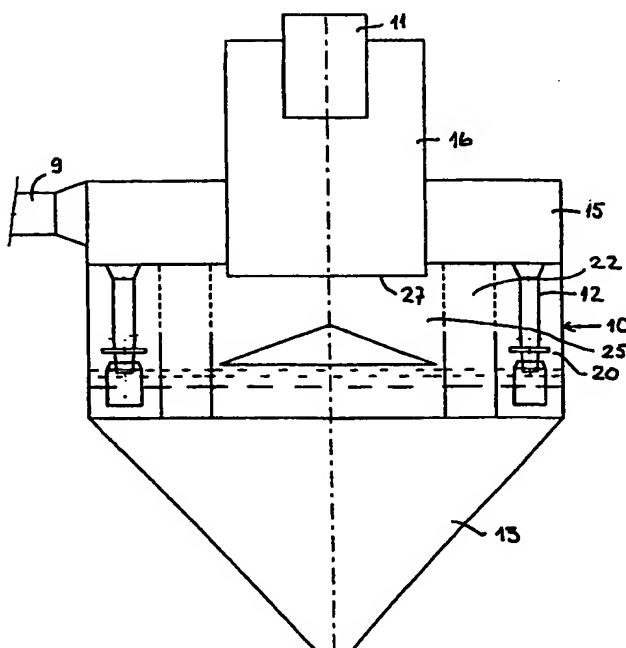
(75) Inventors/Applicants (*for US only*): **LILJA, Launo**  
[FI/FI]; Liisankatu 19 A 13, FIN-28100 Pori (FI).  
**MÄÄTTÄ, Pasi** [FI/FI]; Juurakkoputaantie 4 B 8,  
FIN-94450 Keminmaa (FI). **NIEMELÄ, Pekka** [FI/FI];  
Linankuja 3, FIN-95410 Kiviranta (FI). **NIVALA, Timo**

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: A COMPACT CASCADE SCRUBBER FOR SCRUBBING EXHAUST GAS



(57) Abstract: This invention relates to a cascade-type scrubber, with which the wet scrubbing of the exhaust gas and removal of droplets from the gas can be performed in one and the same scrubber, producing a pure, dropletless gas. It is thus essential that the cascade tubing typical of the cascade scrubber and the equipment for droplet removal are combined into a single compact entity, which is formed of several nested chambers.

WO 01/23071 A1